

REMARKS

Claim 1-7 are pending.

In the Office action, the claims were rejected as follows:

- Claims 1 and 3-7 were rejected as unpatentable over Applicant's admitted prior art in view of U.S. Patent Publication No. 2001/0036218 (Funakawa) or U.S. Patent Publication No. 2002/0024979 (Vilhelmsson et al.).
- Claim 2 was rejected as unpatentable over Applicant's admitted prior art in view of the Funakawa or Vilhelmsson et al. publications and further in view of U.S. Patent No. 6,295,306 (Asami).

As discussed below, applicant respectfully disagrees with those rejections.

Claim 1 recites a wavelength tunable light source comprising a wavelength selection portion that includes a diffraction grating and a mirror. Rotation of the mirror is driven by a direct drive system with a motor having a rotation shaft in the center of rotation of the mirror.

As acknowledged by the Office action, the admitted prior art does not disclose that rotation of the mirror is driven by a direct drive system with a motor having a rotation shaft in the center of rotation of the mirror. Contrary to the statements in the Office action at the bottom of page 3, neither the Vilhelmsson patent document nor the Funakawa patent document discloses that feature.

For example, the Vilhelmsson document relates to a wavelength tuning technique using an external cavity laser and discloses a rotatable arm 360 to move a grating 330. The grating 330 is analogous to the diffraction grating (*not* to the mirror) recited in claim 1. The rotatable arm 360 does not drive a mirror as recited in claim 1. Nor is there any suggestion of doing so. Therefore, there would have been no motivation to modify the admitted prior art using the disclosure of the Vilhelmsson document to obtain the subject matter of claim 1.

Similarly, the Funakawa document relates to an external resonator type laser and discloses a motor 12 as a rotation shaft of an arm 11 supporting a diffraction grating GR2. The motor 12 does *not* drive a mirror as recited in claim 1. Indeed, the Funakawa document actually teaches away from using a mirror:

According to the first aspect of the invention, since the external resonator type laser light source has plural diffraction gratings, and the second diffraction grating is used *instead of* a mirror, it is possible to raise filter effect and depress unstable oscillation such as multi mode oscillation and hop up.

(Page 1, par. [0015]) (Emphasis added) Therefore, one of ordinary skill in the art would not have been motivated to use a mirror as recited in the pending claims.

Furthermore, the Funakawa document is not properly cited as prior art with respect to the pending application, which was filed on December 7, 2001—only several weeks after publication of the Funakawa document. Therefore, the Funakawa document is not prior art under 35 U.S.C. 102(b). In addition, the present application claims (and is entitled to) the priority date of Japanese patent application 2000-389178, filed December 21, 2000. That is before the U.S. filing date of Funakawa application (April 27, 2001). Therefore, the Funakawa document is not prior art under 35 U.S.C. 102(a) or 102(e) either.

The Asami patent was cited with respect to claim 2. The inventor named on that patent is the same as the inventor named in the pending application, and the issue date of that patent (September 25, 2001) is less than one year before the filing date of the pending application (December 7, 2001). Therefore, that patent is not prior art under 35 U.S.C. 102(a), (b) or (e) with respect to the pending claims.

Applicant : Keisuke Asami
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Conclusion

In view of the foregoing remarks, applicant respectfully requests reconsideration and withdrawal of the rejections of the claims.

Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

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Samuel Borodach
Samuel Borodach
Reg. No. 38,388

Fish & Richardson P.C.
45 Rockefeller Plaza, Suite 2800
New York, New York 10111
Telephone: (212) 765-5070
Facsimile: (212) 258-2291